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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,875	10/31/2003	Kazuhiro Machiguchi	2003_1587A	8992
513	7590	02/23/2005	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			LEE, SIN J	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,875

Applicant(s)

MACHIGUCHI ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 3,7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 12/11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites, "[t]he color filter according to *claim 1*" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-6, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurata et al (EP 0 483 693 A2).

Kurata teaches a *colored* photosensitive resin composition for the formation of a colored image, a formation method of a colored image of a *color filter* suitable for use in *solid state camera devices*, liquid crystal display devices and the like, and a formation method of a color filter, in which the steps are repeated to form a *multi-colored image* on the same substrate (see abstract and pg.2, lines 3-5, 9-11).

The Composition 4 shown in Table 1 contains 55 wt.% of copolymer of *vinylphenol and styrene (in the ratio of 1:1)*, 16 wt.% of hexamethoxymelamine (a crosslinking agent), 6 wt.% of photoacid generator, 24 wt.% of a pigment (these wt.%'s are calculated by the Examiner based on the solid contents of the composition), and a solvent (308 parts by weight per 100 parts by weight of the solid contents, as calculated by the Examiner). Kurata does not explicitly disclose the present Mw range of claim 1. However, the prior art teaches (pg.4, lines 1-2) that it is *particularly preferable* that his resin-based material is soluble in aqueous *alkaline developing solution*, and present specification (pg.10, lines 22-28,) states that if the Mw of the alkali-soluble resin is less than 6,000, the solubility of the pattern formed from the colored photosensitive resin composition in the alkaline developer increases so that the film thickness is reduced, and when the Mw exceeds 15,000, the solubility of the exposure portion of the colored photosensitive resin layer in the alkaline developer decreases to that the undissolved residues may remain when the pixels of the color filter are developed. Therefore, it is the Examiner's position that the present Mw range would have been obvious to one of ordinary skill in the art at the time the invention was made because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, Kurata's teaching would render obvious present inventions of claims 1, 2, 6, and 9-12 (since present claim 11 is written in product-by-process claim language, and since Kurata teaches a color filter having a multi-colored image on the same substrate, the prior art

teaches present color filter of claim 11 even if the prior art's process is different from the present steps cited in claim 11).

Kurata teaches (pg.6, lines 1-9) that the weight ratio of (resin-based material + photoacid generator) : pigment is preferably 90/10 to 40/60. This means that in the Composition 4 of Table 1, for 7.1 g of the copolymer of vinylphenol and styrene and 0.8 g of the photoacid generator, there can be 0.9-12 g of the pigment. This gives 5-54 wt.% of the pigment based on the solid components. Since this range overlaps with present range of claim 4, the prior art's teaching would render present range *prima facie* obvious. In the case "where the [claimed] ranges overlap or lie inside ranges disclosed by the prior art," a *prima facie* case of obviousness would exist which may be overcome by a showing of unexpected results, In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Therefore, Kurata's teaching would render obvious present invention of claim 4.

Kurata teaches that the photoacid generator of his composition is preferably used in the amount of 0.5-30 wt.% based on the solid contents (see pg.5, lines 29-31). Since this range overlaps with present range of claim 5, the prior art's teaching would render present range *prima facie* obvious. See In re Wertheim, supra. Therefore, Kurata's teaching would render obvious present invention of claim 5.

Allowable Subject Matter

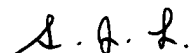
5. Claims 3, 7, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Kurata does not teach or suggest the use of more than one alkali-soluble resin, and thus, the prior art does not teach present invention of claim 3. Kurata does not teach or suggest present range of 1-20 parts by weight per 100 parts by weight of the solid components for the amount of the alkali-soluble resin. Therefore, the prior art does not teach present inventions of claims 7 and 8.

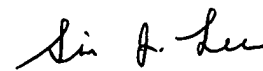
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
February 19, 2005



Sin J. Lee
Patent Examiner
Technology Center 1700